

Project Hanford Lessons Learned

Title: Worker and Management Involvement Leads to Successful Readiness Review

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Identifier: 2005-RL-HNF-0040

Lessons Learned Summary:

Early involvement of workers and managers in the startup readiness process is essential to the completion of a successful readiness review. Directly involving managers and workers in the design and fabrication of new and/or specialized equipment can also contribute to project readiness and approval.

Discussion of Activities:

In September 2005, T Plant successfully completed a DOE Headquarters Operational Readiness Review (ORR) for treatment of K Basin North Load-Out Pit (NLOP) sludge. The treatment process utilizes newly fabricated equipment to retrieve sludge from transport containers and to grout the material through an automated process. A high level of involvement and feedback by both workers and the management team was maintained throughout the fabrication and testing process.

Analysis:

During the fabrication of the sludge grouting equipment, operations personnel were assigned directly to the fabrication facility. This is a noteworthy practice for a number of reasons: it allowed direct worker feedback in accordance with ISMS core functions; was a strong ALARA practice as this was a non-hazardous environment; provided training that exceeded what would have been available in a classroom setting; allowed procedure development to proceed with expert operator knowledge. The ORR team recommended that this noteworthy practice be adopted where possible for future projects

Management was directly involved during equipment fabrication, performed oversight during the management self-assessment of readiness, and performed infield observation of dry run activities. Because of a heightened awareness to design control issues, the management self assessment took a detailed look at the design documentation provided by the subcontractor. Issues were self-identified and corrected prior to declaring readiness. Management's focus on weaknesses identified in previous Readiness Reviews was good application of lessons learned (reference PHMC Lessons Learned [2002-RL-HNF-0010](#), "Common Readiness Review Issues").

Recommended Actions:

1. Assignment of operations personnel to fabrication and testing activities should be considered when equipment is fabricated locally (DOE ORR Team Recommendation).
2. Management should set aside dedicated time for oversight activities at all stages of the project. Involvement should include both line management and senior management.

3. Previous startup weaknesses and lessons learned should be identified early in the process and rigorous self-assessment of them should be performed.
4. Facility engineering personnel must provide oversight of the technical basis for operations even when subcontractor personnel are tasked with providing their expertise. When a range of operation is established, equipment must be reviewed to ensure that operating parameters and tolerances fall within that range.
5. A USQ must be performed against the actual operating conditions that will be experienced prior to declaring readiness. A USQ against simulated conditions is not adequate.
6. When simulations are performed to prepare for an activity, the simulation process should be reviewed for any differences to routine operations and the differences should be analyzed to determine if the configuration of equipment has changed. If so, compensatory measures should be established to ensure the equipment is returned to normal configuration.
7. Whenever an assumption is made related to equipment function, that assumption must be clearly documented during the Acceptance Testing process.

Estimated Savings/Cost Avoidance: Not determined

Priority Descriptor: Green/Good Work Practice

Work / Function: Other

Hanford Functional Categories: N/A

Hazard: N/A

ISM Core Function: Define Work

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Authorized Derivative Classifier: Not required

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Keywords: Operational Readiness Review, Start-up, Sludge, T Plant, K Basins, Grouting equipment

References: DOE Headquarters Operational Readiness Review (ORR) for Treatment of K Basin North Load Out Pit (NLOP) Sludge, PHMC Lessons Learned [2002-RL-HNF-0010](#), “Common Readiness Review Issues”